Paper No. 16

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte RICHARD EDMOND BERRY
and SCOTT HARLAN ISENSEE

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Appeal No. 1999-2607
Application 08/826,618[1]

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ON BRIEF

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Before JERRY SMITH, BARRETT, and RUGGIERO, Administrative Patent
Judges.

BARRETT, Administrative Patent Judge.

DECISION ON APPEAL

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[1] Application for patent filed April 4, 1997, entitled
"Viewer Interactive Three-Dimensional Objects and Two-Dimensional
Images in Virtual Three-Dimensional Workspace."

- 1 -

This is a decision on appeal under 35 U.S.C. § 134 from the final rejection of claims 20-22.

We reverse.

RELATED APPEAL

This appeal is related to Appeal No. 1999-2608 in Application 08/826,616, decided concurrently herewith.

BACKGROUND

The disclosed invention relates to a system, method, and computer program for a three-dimensional workspace wherein certain three-dimensional objects serve as proxies for user interactive application programs. Such objects may be selected to bring forth planar two-dimensional interactive user interfaces having images resembling those of the three-dimensional objects appearing in front of the three-dimensional workspace. The invention permits the viewer or user to utilize conventional two-dimensional interfaces within his three-dimensional virtual reality workspace simultaneously with his continued navigation through his three-dimensional workspace. For example, the user may select the book 46 in the three-dimensional workspace of figure 2 to bring up an initial two-dimensional representation of the book in front of the workspace, as shown in figure 3, and then interact with the two-dimensional interface to change pages,

as shown in figure 4. The user can interactively relate to the

two-dimensional interface while the three-dimensional workspace

behind the object remains active and navigable, as shown in

figure 5 where the viewpoint has changed.

Claim 20 is reproduced below.

20. A data processor controlled display system for displaying a virtual three-dimensional workspace comprising:

means for displaying a plurality of virtual three-dimensional objects in said virtual workspace;

means for storing for each of said virtual objects, at least one planar two-dimensional image of said virtual object;

user interactive means for selecting one of said virtual objects;

means responsive to said selecting means for displaying the two-dimensional image of said selected object;

user interface means for navigating away from said selected virtual object within said three-dimensional workspace, and

means for user interactive input to said displayed two-dimensional image, said input means remaining interactive after the user has navigated away from said selected virtual object.

The Examiner relies on the following prior art references:

Linnett et al. (Linnett)   5,682,469   October 28, 1997
                                          (filed July 8, 1994)
Lynch et al. (Lynch)   5,689,669   November 18, 1997
                                          (filed April 29, 1994)

Claims 20-22 stand rejected under 35 U.S.C. § 103(a) as

being unpatentable over Linnett and Lynch. The Examiner finds

that Linnett teaches the claimed invention except for the

two-dimensional image corresponding to the three-dimensional

object being an "image of said virtual object." The Examiner

finds that the notebook of figure 9 of Lynch is a two-dimensional

metaphor of the three-dimensional notebook object 160 in figure 3

and, thus, Lynch teaches a "two-dimensional image of said virtual

object." The Examiner concludes that it would have been obvious

to modify the two-dimensional images in Linnett to be a "two-

dimensional image of said virtual object," as claimed.

We refer to the final rejection (Paper No. 5) (pages

referred to as "FR__") and the examiner's answer (Paper No. 13)

(pages referred to as "EA__") for a complete statement of the

Examiner's position, and to the brief (Paper No. 11) (pages

referred to as "Br__") and reply brief (Paper No. 14) (pages

referred to as "RBr__") for a statement of Appellants' arguments

thereagainst.

<u>OPINION</u>

Appellants argue (Br5) that the key elements of the

invention are: (1) the storage for each of a plurality of

virtual three-dimensional objects, an associated two-dimensional

image of the object which may be selectively activated to

function as a two-dimensional user interactive interface; while

(2) most significantly, the user may at the same time continue

his interactive navigation through the three-dimensional

workspace away from the selected virtual object. These

limitations find support in the claims. The issue is whether the combination of references would have suggested the obviousness of selecting a three-dimensional object to display a two-dimensional image of the selected object and navigating away from the selected virtual object while the two-dimensional image remains active for user input.

Appellants argue that in Linnett, once a selection is made, the user brings up his selected program routine which he must close out before returning to navigation in the three-dimensional workspace (Br6). It is argued that the selected program interface takes up the entire workspace and, thus, there is no room for any simultaneous three-dimensional navigation in that workspace (Br6; RBr1-2). We do not find a response by the Examiner. However, the rejection finds that Linnett teaches navigating away from a selected virtual object within the three-dimensional workspace while a two-dimensional image of a selected object remains displayed, referring to column 1, lines 27-30, column 12, lines 10-15, and column 13, lines 9-17 (EA4).

We understand Linnett to teach that the applications interface with the user via the balloons associated with the personal character (col. 4, lines 34-36: "The applications 28 interact with the user via the user interface elements, such as

the personal character, that are also used in the shell.";

col. 8, lines 17-21: "System services that are provided as part

of the services 26 draw the speech balloon at the request of an

application 28. The contents of the speech balloon (i.e., the

text and controls contained therein) are the responsibility of

the application."). Thus, even if some program interfaces take

up the entire workspace as argued by Appellants (although this is

not described by Linnett), at least some objects bring up

two-dimensional user interfaces (the balloons associated with the

personal characters) that do not take up the whole screen. For

example, figure 3 shows the interface for a gardening application

program with part of the room visible.

However, we find no suggestion at the locations in Linnett

noted by the Examiner, or elsewhere in Linnett, that the user can

navigate away from the selected object in the three-dimensional

workspace while the two-dimensional image remains active for user

input. That is, while the three-dimensional workspace remains

visible in back of the speech balloons and other parts of the

two-dimensional interface (e.g., figure 3), there is no

indication or suggestion that the user can navigate away while

the application interface is open. Although the cellular

telephone object described at column 13, lines 9-17, follows the

user around, there is no suggestion that the two-dimensional

telephone interface, once opened, lets the user navigate away.

Accordingly, we find that Linnett does not disclose "user

interface means for navigating away from said selected virtual

object within said three-dimensional workspace, and means for

user interactive input to said displayed two-dimensional image,

said input means remaining interactive after the user has

navigated away from said selected virtual object," as recited in

claim 20 and corresponding limitations in claims 21 and 22.

Lynch does not cure the deficiencies of Linnett, as we will

show. The Examiner's statement of the rejection does not rely on

Lynch for anything more than a teaching of a "two-dimensional

image of said virtual object," which limitation is not at issue.

Nevertheless, some of the Examiner's remarks rely on Lynch and we

discuss Lynch and the Examiner's remarks here.

Appellants argue that Lynch relates to navigation in only a

two-dimensional display interface having three distinct

two-dimensional levels or layers and, thus, does not relate to

navigation on a single level three-dimensional workspace (Br6-7).

The Examiner states that the levels are part of one workspace,

but, in any case, the room level constitutes a single workspace.

It is debatable whether Lynch shows a three-dimensional
workspace, but Lynch is not really needed for this limitation.
Although the representations of rooms and objects have a
three-dimensional appearance, the user cannot move the viewpoint
in the third dimension, but can only navigate left and right in
the hallway and downtown using the arrows (e.g., figures 4E and
25A) or move up or down a level (e.g., using the "Hallway"
description in the title bar 180 of figure 3 to "step back" to
where the user was before the present level). Nevertheless, it
might be found that selecting a door in the hallway to move into
a room is broadly analogous to navigating in a third dimension.
We agree with the Examiner that the object levels do not
necessarily correspond to different workspaces, because the
object levels can be considered a construct for the workspace.
Nevertheless, this does not help the rejection.

It is argued that it is inherent in Lynch that to navigate
away the user must leave the two-dimensional level he is
currently working in and, thus, there is no way his current
working level can remain active after the user has navigated away
(Br8). The Examiner points to the "step back" function and
hypothesizes a scenario where the user (1) selects an object from
the desktop to bring up a two-dimensional interface, (2) executes

the "step back" function to return to the desktop, and

(3) selects another object for display. The Examiner states that

(FR9): "As a result, there can be a plurality of interfaces

displayed on the screen, but which are not simultaneously visible

to the user." The Examiner also states (EA8): "While the back

function removes a selected two-dimensional image from the user's

view, it does not deactivate or close the two-dimensional image

and thus does not remove the two-dimensional image from display."

Appellants respond that there is no support in Lynch for the

Examiner's interpretation (Br8-10).

      We agree with Appellants that Lynch does not support the

Examiner's scenario. Initially, the Examiner's finding (at EA8)

that removing a selected two-dimensional image from the user's

view does not remove the two-dimensional image from the display

is not understood. A "displayed image" requires a visible image,

not an image stored in a display, e.g., stored in the display

memory. There is no suggestion in Lynch that a two-dimensional

image corresponding to an object remains displayed during and

after navigation. Lynch teaches that the two-dimensional

application interfaces take up the whole display (e.g.,

figures 6-15 and 18). The only "navigation" that can be done

from the user interface is to return to the level where the

object was selected; e.g., to "step back" to the Desk from the
telephone interface in figure 6. Lynch does not suggest that an
interface remains displayed (visible) and active if the user
navigates using the "step back" function. In fact, because the
user returns to the place where the object was selected, which
occupies the whole screen, Lynch suggests that the application
interface is closed. Moreover, using the arrow to "step back" to
the Desk from the telephone interface in figure 6 would not
constitute "user interface means for navigating away from said
selected virtual object within said three-dimensional workspace"
because the object would still be in view. The user would have
to go to the Hallway from the Desk to navigate away. There is no
suggestion in Lynch that an application interface remains active
and displayed once the user "steps back" to the Desk, much less
any suggestion that an interface would go with the user as he
navigates away from the Desk.

    If the Examiner's position is that the claim language "means
for user interactive input to said displayed two-dimensional
image, said input means remaining interactive after the user has
navigated away from said selected virtual object," does not
preclude navigating away and then returning, this interpretation
has not been expressly stated. The language "interactive input

to <u>said</u> displayed two-dimensional image" (emphasis added)

requires interactive input with the two-dimensional image

displayed in response to user selection of a virtual object, (the

antecedent for the term "said"), which means that the displayed

two-dimensional image must be continuously present during and

after navigation or it would not be "said" displayed image, but

some other image. This does not happen in Lynch.

For the reasons stated above, we conclude that the Examiner

has failed to establish a prima facie case of obviousness. The

rejection of claims 20-22 is reversed.

<div align="center">REVERSED</div>

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                    JERRY SMITH                    )
                    Administrative Patent Judge    )
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                                                   )  BOARD OF PATENT
                    LEE E. BARRETT                 )     APPEALS
                    Administrative Patent Judge    )      AND
                                                   )   INTERFERENCES
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                    JOSEPH F. RUGGIERO             )
                    Administrative Patent Judge    )
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Application 08/826,618

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